Graniterock
MATERIAL SUPPLIER / ENGINEERING CONTRACTOR • LICENSE #22

January 24, 2011

Department of Planning, Building Code & Enforcement
City of San Jose
200 East Santa Clara Street
San Jose, CA 95113-1905
Attn: Ms. Jenny Nusbaum

Re: Graniterock Conditional Use Permit City File No. CP00-03-009; 2010 Annual Revegetation Monitoring Report

Dear Ms. Nusbaum:

Condition 35 of the above referenced Use Permit requires that Graniterock submit an annual report documenting the status and results of the required revegetation mitigation efforts.

Graniterock has successfully completed Year 5 of the revegetation buffer area. The Year 5 Monitoring Report (Resource Biotic Group) is attached. This report includes complete photo documentation as required.

Construction of the revegetation area was completed in 2005 and has now completed its 5th year of revegetation monitoring. If the City wishes to make arrangements to inspect the site or if you need additional information please contact me at (831) 768-2140.

Sincerely,

GRANITE ROCK COMPANY
Mystère Sapia, Environmental Specialist

Biotic Resources Group
Biotic Assessments ◆ Resource Management ◆ Permitting

CP 00-009

Berryessa Asphalt Recycling Plant Riparian Revegetation Project

Year 5 (2010) Monitoring Report

Prepared for:
Granite Rock Company
Attn: Mystere Sapia

Prepared by:
Biotic Resources Group
Kathleen Lyons, Plant Ecologist

December 3, 2010

2551 S. Rodeo Gulch Road #12 ◆ Soquel, CA 95073 ◆ (831) 476-4803 ◆ brg@cruzio.com

BERRYESSA ASPHALT RECYCLING PLANT
RIPARIAN REVEGETATION PROJECT

YEAR 5 (2010) MONITORING REPORT

INTRODUCTION

The Berryessa Asphalt Plant is located in the City of San Jose, along Berryessa Road between Highway 101 and Coyote Creek (Figure 1). The Riparian Revegetation Site encompasses approximately 20,400 square feet (0.468 acre) and provides riparian mitigation plantings for Granite Rock Company's recycling center. Development of the recycling project (e.g., storm drain outlet into Coyote Creek and future recycling activities adjacent to the creek) necessitated riparian mitigation activities pursuant to the requirements of the project's Conditions of Approval (City of San Jose) and regulatory agency permits (i.e., California Department of Fish and Game [CDFG] and California Regional Water Quality Control Board [RWQCB]).

A Revegetation Plan was prepared for the project that identified the activities necessary for the establishment of riparian woodland adjacent to the recycling facility and Coyote Creek, in conformance to the approved *Conceptual Landscape Plan* (Drawing No. 22199P01-104, Thomas Reid Associates, Sept. 2004). The revegetation area is located in a 30-foot wide previously disturbed area where the revegetation will increase the riparian habitat values of Coyote Creek. All existing wetland and riparian habitat along Coyote Creek were to be retained in their existing state, except for the removal of invasive non-native plant species (i.e., giant reed, *Arundo donax*). The revegetation area is located in an approximately 30-foot wide band extending outward from the existing riparian woodland (*Berryessa Asphalt Recycling Plant Riparian Revegetation Project – Year 1 As-Built Conditions Report,* Biotic Resources Group, December 2005).

Pursuant to these plans and permit conditions, the Year 5 (2010) condition of the revegetation area (i.e., status of plants) was documented. The result of this monitoring is described in this report.

SUMMARY OF PROJECT PERMITS AND REQUIREMENTS BY AGENCY

The projects revegetation requirements are derived from the City of San Jose's and other regulatory agencies permit conditions and the need to create self-sustaining natural habitats within the projects 5-year reporting schedule. The maintenance requirements follow those outlined in the revegetation plan.

Specific revegetation plan goals include:

1. Establish mitigation plantings within a 0.468-acre area along the top-of-bank of Coyote Creek.
2. Utilize native plant materials collected from the Coyote Creek watershed.
3. Utilize an irrigation system during the plant establishment period (i.e., first 3 years).
4. Implement periodic weed control to benefit the mitigation planting area.
5. Maintain a minimum 80% survival rate of all container stock and 60% survival of willow and cottonwood cuttings during the first three years, replacing dead plants if survival rates fall below this performance standard.
6. Establish four photo stations to document progress of the revegetation.
7. Document the progress of the revegetation over a five-year period by monitoring plant survival, health, and vigor, as well as site maintenance.

8. Submit annual reports to City of San Jose, CDFG, and RWQCB by December 31 of each monitoring year.

The monitoring program for the revegetation areas is designed to ensure project compliance with applicable regulatory permits and conditions. This is to be accomplished by initiating a 3-year plant establishment maintenance program such that plant survival rates are maximized and desired habitat features are achieved. The program also includes implementation of a 2-year post-establishment period maintenance program, which also maximizes the potential for long-term plant survival and habitat features. The revegetation maintenance program includes the implementation of remedial actions on a yearly basis if plantings fail to meet performance standards. The success of the maintenance and management program are to be documented by implementing a 5-year monitoring program that documents the status of the habitat areas and reports the findings to regulatory agencies on a yearly basis.

YEAR 5 (2010) MONITORING

Native riparian plantings were installed within the designated revegetation area in October and November 2005. Central Coast Wilds, a landscape contractor, installed container plants (trees and shrubs) and cuttings of willow and cottonwood within the revegetation area as well as additional plantings around a previously installed storm drain outfall. A list of the plants specified in the Revegetation Plan is presented in Table 1. Replacement plantings were installed on site in winter 2007. In addition to the installation of two blue elderberry (*Sambucus mexicana)* plants required to meet Year 2 success criteria, additional plants were installed: five blue elderberry, six California rose (*Rosa californica),* six box elder (*Acer negundo)*, and five California blackberry (*Rubus ursinus)*, and three California buckeye (*Aesculus californica)*.

Table 1. As-Built Conditions for Riparian Revegetation Site (2005)

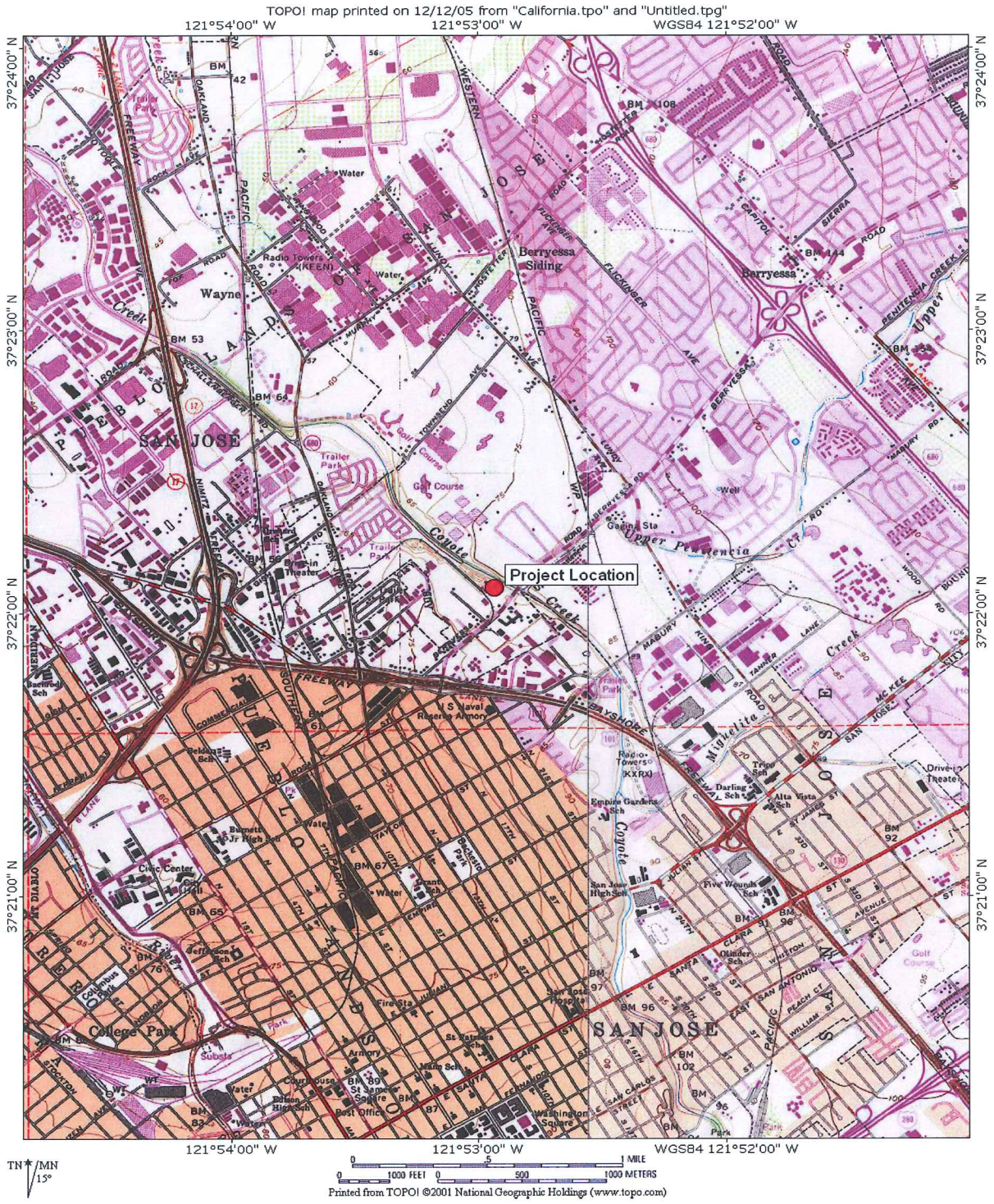
Common Name	Scientific Name	Size of Propagule Installed	Quantity Specified in *Revegetation Plan*
Box Elder	*Acer negundo*	1-gallon	10
Fremont Cottonwood	*Populus fremontii*	Cutting	15
Willow	*Salix sp.*	Cutting	14
Blue Elderberry	*Sambucus mexicana*	1-gallon	12
California Blackberry	*Rubus ursinus*	1-gallon	20
California Rose	*Rosa californica*	1-gallon	20
Total			**91**

Methodology

Kathleen Lyons of the Biotic Resources Group documented the Year 5 condition of the riparian mitigation area on December 2, 2010.

Monitoring tasks included an evaluation of environmental features of the area, such as the presence of surface erosion, presence of invasive, non-native plant species, and human disturbances. The mitigation area was also evaluated as to site maintenance, such as supplemental irrigation system and weeding.

The monitoring session documented plant survival of all installed plants, as well as each plants health and vigor (i.e., presence of chlorosis, limb dieback, drought stress). The rating system used for plant health and vigor is listed on Table 2. Natural recruitment of native plant species was also noted.

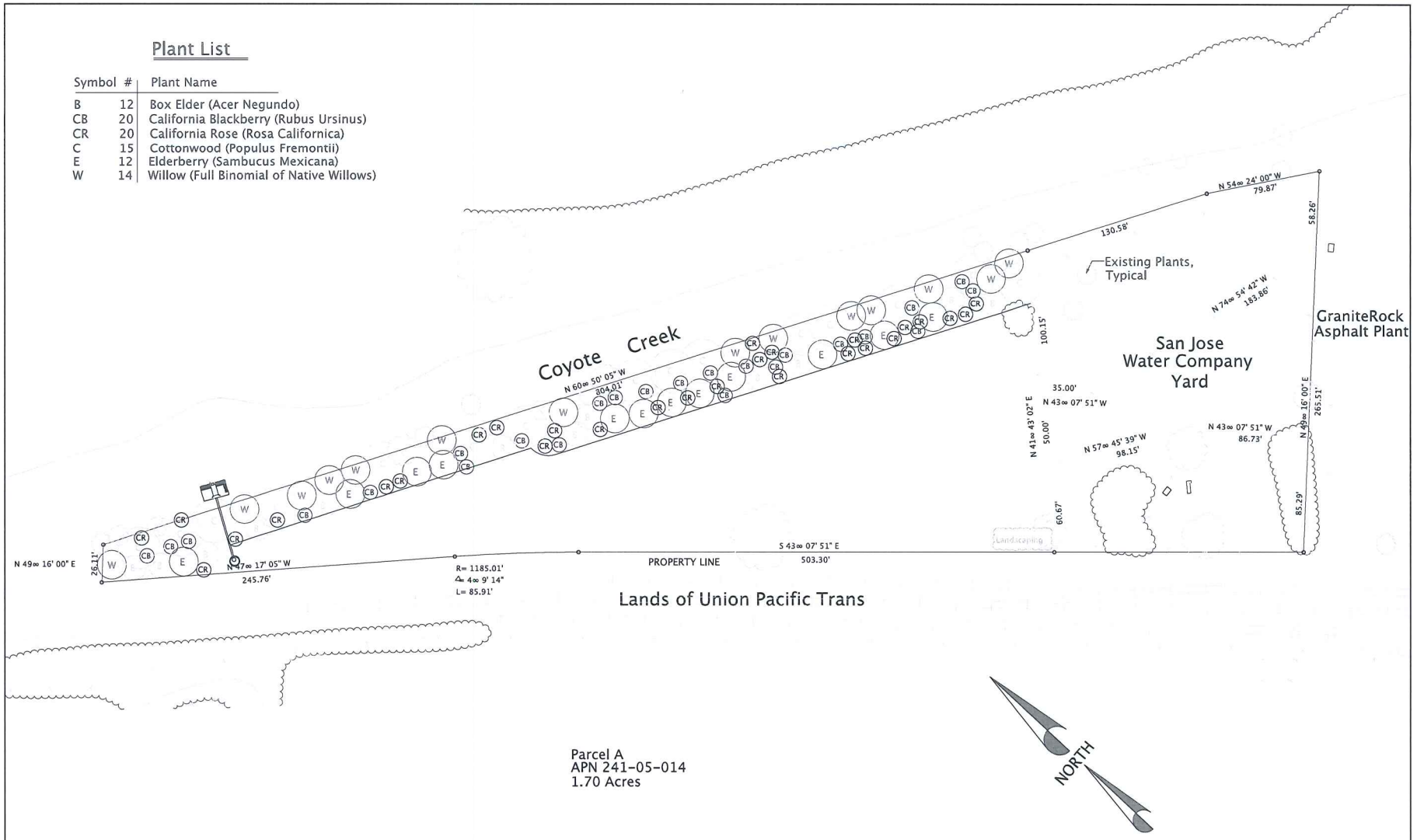


Base Map: USGS Topographic Map, San Jose

Biotic Resources Group 2551 S. Rodeo Gulch Road #12 ◆ Soquel, CA 95073 (831) 476-4803 ◆ brg@cruzio.com	Berryessa Asphalt Recycling Plant Riparian Revegetation Area Location Map	Figure 1 12/10

Plant List

Symbol	#	Plant Name
B	12	Box Elder (Acer Negundo)
CB	20	California Blackberry (Rubus Ursinus)
CR	20	California Rose (Rosa Californica)
C	15	Cottonwood (Populus Fremontii)
E	12	Elderberry (Sambucus Mexicana)
W	14	Willow (Full Binomial of Native Willows)



Source: Thomas Reid Associates, 9/04

Biotic Resources Group

2551 S. Rodeo Gulch # 12 ◆ Soquel, California 95073

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BERRYESSA ASPHALT RECYCLING PLANT

Figure 2

220-03

Table 2. Plant Health and Vigor Rating System

Code	Rating	Health Characteristics	Vigor Characteristics
4	Excellent	75-100% healthy foliage	Vigorous new growth observed throughout plant
3	Good	50-74% healthy foliage	Vigorous new growth observed only at terminal bud
2	Fair	25-49% healthy foliage	No new growth evident
1	Poor	0-24% healthy foliage	Stem dieback observed

Results

The December monitoring was conducted approximately five years after the initial plantings were installed; 95 planting sites were documented to contain live trees, shrubs, or vines.

Container Stock Plants

Box elder, blue elderberry, California buckeye, California blackberry, California rose, and snowberry plants were installed as container stock. The *Revegetation Plan* required the installation of 62 container stock trees and shrubs, with the requirement that 50 plants be alive and healthy each year (80% survival rate). At the December 2010 monitoring, the site was found to support 96 container stock trees and shrubs. The number of surviving container stock plants exceeds the required 80% survival performance standard (50 plants) due to additional plantings installed by Granite Rock in 2005 and 2007 and volunteer recruitment.

Pole Cuttings

Willows and Fremont cottonwoods were installed on site as dormant pole cuttings. The *Revegetation Plan* specified installation of 29 cuttings, with the requirements that 17 plants be alive and healthy each year (60% survival rate). As of November 2009, the site supports 39 willow and cottonwood pole cuttings. The additional plants reflect natural recruitment of willows and cottonwoods within the mitigation area. The number of surviving willow and cottonwood pole cuttings exceeds the 60% survival performance standard.

Plant Height and Vigor

Average tree heights ranged from 1.25 feet (young naturally recruited willow) to over 30 feet for Fremont cottonwood (an increase from 23 feet in Year 4). The tallest trees are cottonwoods (range in height from 3.5 feet to 30 feet) and willow (range in height from 1.25 feet to 17 feet). Box elders range in height from 3 feet to 17 feet, with the average height of 10.25 feet. This is an increase from an average height of 6.9 feet in Year 4. Shrub heights range from 1.3 feet (California blackberry) to 3.4 (California rose).

Plant vigor and health ratings ranged from a low of 3.2 for California blackberry. The health of blue elderberries increased to 4.0 in 2010. There was no evidence of stem dieback on the surviving trees. All other species exhibited very good to excellent vigor and health, as listed on Table 3.

The trend in plant height, in feet by species, from Year 1 (2006) to Year 5 (2010) is depicted in Figure 3. The average plant height for most plantings increased in 2010. A 5-year old Fremont cottonwood which is over 30 feet tall is depicted in Figure 4.

Table 3. Year 5 (2010) Plant Survival Data within Riparian Mitigation Area

Plant Species	Number of Plants Specified in *Revegetation Plan*	Number of Plants Alive 12/10*	Percent Survival in Year 5	Average Vigor/Health	Average Height and Range (Feet)
Trees					
Box Elder	10	7	70%	4.0	10.25 (7.5-17)
Fremont Cottonwood	15	19	100%*	3.4	10.5 (3.5-30)
Willow	14	20	100%*	3.7	8.7 (1.25-17)
Blue Elderberry	12	4	33%	4.0	6.0 (5.5- 8)
California Buckeye	0	0	-	-	-
Subtotal	**51**	**50**	**96%**	**-**	**-**
Shrubs					
California Blackberry	20	9	45%	3.2	1.3 (0.2-3)
California Rose	20	37	100%*	3.8	3.4 (1.5-6)
Subtotal	**40**	**46**	**100%**	**-**	**-**
TOTAL	**91**	**96**	**100%***	**-**	**-**

* Reflects survival of species over-planted in 2005, replacement plantings in December 2007, and volunteer recruitment of native species observed in December 2010.

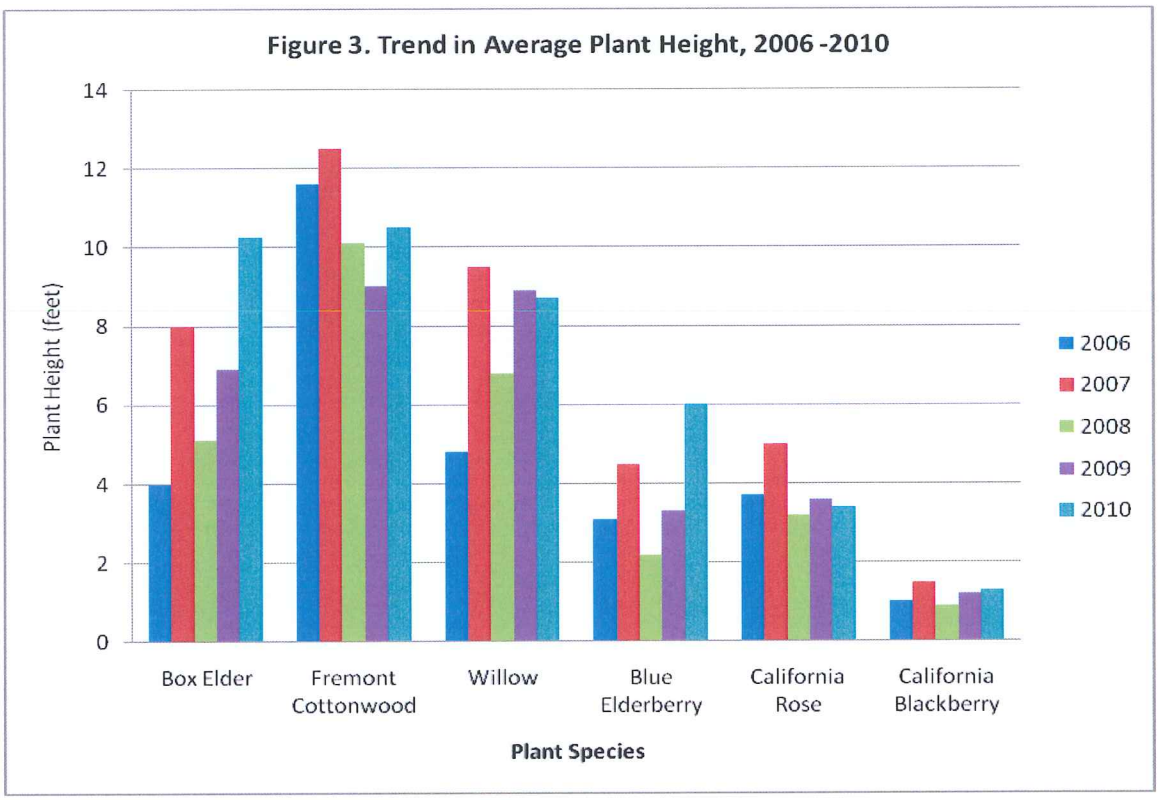

Figure 4. Fremont cottonwood exceeding 30 feet tall in Year 5, December 2010.

Some weeds were noted in the revegetation area. Patches of giant reed (*Arundo donax)*, an invasive plant species growing within the adjacent riparian corridor, was observed within the mitigation area during the December 2010 inspection. Granite Rock personnel are scheduled to remove/control these plants (M. Sapia, pers, comm., December 2009).

Natural recruitment of native trees and shrubs was observed within the mitigation area. Willow and cottonwood saplings have naturally established in the swale area and coyote brush shrubs are establishing in other areas of the site. California rose plants are spreading in the swale area, as evidence by new sucker growth. To encourage natural recruitment of plants, Granite Rock personnel spread coyote brush seeds onto open areas to encourage natural recruitment of shrubs within these open areas. In addition, the limbs of the fallen willows and cottonwoods have been retained on site to create microhabitats that are conducive to natural recruitment of native plants. Young willow cuttings were also installed in an open area along the perimeter fence.

The outer (western) edge of the mitigation area was fenced with a wooden fence and no significant human disturbances were noted in the mitigation area. One box elder tree (with protective cage) was knocked over near the railroad tracks. Granite Rock personnel are scheduled to remove the cage and re-stake the tree (M. Sapia, pers., comm., December 2009).

The above-ground irrigation system is no longer needed and can be removed from the site. Granite Rock personnel are scheduled to remove the irrigation components (M. Sapia, pers., comm., December 2009).

Photo Stations

Four permanent photo stations were established as part of the As-Built Conditions monitoring. The stations are located at the northern and southern ends of the mitigation area (looking south and north, respectively) and two stations are located in the mid section of the mitigation area, with views to the southwest and northeast. These photo stations, documenting the Year 0 (as-built) and Year 5 condition of the site are portrayed in Figures 5-8.

Photo Station 1

Figure 5A. Photo Station #1, taken from southern end of revegetation area, looking northward along the top edge of Coyote Creek, December 2005.

Figure 5B. Photo Station #1, taken from southern end of revegetation area, looking northward along the top edge of Coyote Creek, December 2010.

Photo Station 2

Figure 6A. Photo Station #2, taken from mid section of revegetation area, looking eastward toward top edge of Coyote Creek, December 2005.

Figure 6B. Photo Station #2, looking eastward along top edge of Coyote Creek, December 2010.

Photo Station 3

Figure 7A. Photo Station #3, taken from mid section of revegetation area, looking southward along the top edge of Coyote Creek, December 2005.

Figure 7B. Photo Station #3, looking southward along the top edge of Coyote Creek, December 2010.

Photo Station 4

Figure 8A. Photo Station #4, taken from northern end of revegetation area, looking southward along the top edge of Coyote Creek, December 2005.

Figure 8A. Photo Station #4, looking southward along the top edge of Coyote Creek, December 2010.

CONCLUSIONS AND RECOMMENDATIONS

According to the mitigation plan for the project, Granite Rock is responsible for 80% survival of container stock trees and shrubs and 60% survival of willow and cottonwood pole cuttings. As per the data collected in December 2010 (Year 5) the project meets these performance standards. Site maintenance is adequate to control invasive weeds and to promote good health of the plantings.

Revegetation Area Maintenance

The revegetation area should continue to be weeded to reduce the presence on invasive, non-native plant species. Actions should be focused on the following tasks:

1. Remove any patches of giant reed that sprout within the mitigation area.
2. If other invasive weeds occur on site, remove occurrences taking care to avoid injury to installed trees and shrubs and naturally establishing native plants.

Although the mitigation site is meeting its performance standards, there are some open areas that could benefit from natural recruitment or plantings of native trees or shrubs such that a continuous canopy of plant cover can be achieved in the future. Although not needed to meet plant survival rates, additional willow and/or cottonwood pole cuttings could be installed near the perimeter fence. This would increase plant cover in this somewhat open area. Cuttings should be installed when the plants are dormant, which is typically between December 15 and January 15.

Volunteer recruitment of willow, cottonwood, and coyote brush should be encouraged. All existing volunteer shrubs and trees should be retained, even those that are growing in close proximity to planted trees and shrubs. California blackberry plants should be allowed to spread their stems.

Monitoring

No additional monitoring is recommended. The project has met its Year 5 performance standards and no additional monitoring is required.

Reporting

No additional reporting is required as the project has met its Year 5 performance standards. This Year 5 (2010) monitoring report is due to the City of San Jose, CDFG, and RWQCB by December 31, 2010.